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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,470	10/17/2003	Michael D. Gallagher	BUZA-013/01US	3024
48947	7590	12/15/2005	EXAMINER	
STATTLER, JOHANSEN, AND ADELI LLP 1875 CENTURY PARK EAST SUITE 1360 CENTURY CITY, CA 90067			MILLER, BRANDON J	
			ART UNIT	PAPER NUMBER
			2683	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/688,470

Applicant(s)

GALLAGHER ET AL.

Examiner

Brandon J. Miller

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7, 9, 11-12, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honkasalo in view of Pauli.

Regarding claim 1 Honkasalo teaches a system comprising: a mobile station, including: a licensed wireless service having a licensed wireless channel serviced by a telecommunications network (see col. 6, lines 59-63 and col. 15, lines 62-65). Honkasalo teaches an unlicensed wireless service activated when the mobile station is within an unlicensed wireless service area (see col. 6, lines 63-65 and col. 8, lines 20-24). Honkasalo teaches an indoor base station operable to receive an unlicensed wireless channel from a mobile station (see col. 8, lines 25-33). Honkasalo teaches an indoor network controller coupled to the indoor base station and adapted to exchange signals with a telecommunication network (see col. 8, lines 33-39). Honkasalo teaches the mobile station, the indoor base station, and the network controller are configured to establish a communication session on the unlicensed wireless channel using a standard base station controller interface of the licensed network (see col. 15, lines 10-25). Honkasalo does not specifically teach a first level 1, level 2, and level 3 protocol for a licensed wireless service, a second level 1, level 2, and level 3 protocol for an unlicensed

Art Unit: 2683

wireless service, and a network controller and an indoor base station configured to convert the second level 1, level 2, and level 3 protocol into a standard base station controller interface protocol recognized by the telecommunication network. Pauli teaches level 1, level 2, and level 3 protocols for a wireless service area (see col. 13, lines 52-55 and col. 14, lines 15-20). Pauli teaches a network controller and a base station configured to convert the level 1, level 2, and level 3 protocols into a base station controller interface protocol recognized by the telecommunication network for handover (see col. 14, lines 1-20 & 36-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include a first level 1, level 2, and level 3 protocol for a licensed wireless service, a second level 1, level 2, and level 3 protocol for a unlicensed wireless service, and a network controller and an indoor base station configured to convert the second level 1, level 2, and level 3 protocol into a standard base station controller interface protocol recognized by the telecommunication network because communication protocols vary between different communication systems and it would allow for an improved radio communication connection between a base station and a mobile station in a first radio communication system, which operates at least partially within the coverage area of a second radio communication system.

Regarding claim 2 Honkasalo teaches generating a service request message to the telecommunications network to imitate a handover from the licensed wireless channel to the unlicensed wireless channel (see col. 14, lines 56-62).

Regarding claim 3 Pauli teaches a telecommunications network that comprises a mobile switch center for voice data (see col. 7, lines 1-7 and col. 14, lines 6-9).

Regarding claim 7 Honkasalo teaches radio resources adapted for an unlicensed wireless system (see col. 4, lines 47-51). Honkasalo does not specifically teach wherein the second level 3 protocol comprises a radio resource sublayer, wherein an access mode switch is triggered to utilize a mobility management sublayer and a call management sublayer shared with the first level 3 protocol. Pauli teaches a level 3 protocol that comprises a radio resource sublayer (see col. 16, lines 9-10). Pauli teaches an utilizing a mobility management sublayer and a call management sublayer (see col. 13, lines 65-67 and col. 14, lines 15-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein the second level 3 protocol comprises a radio resource sublayer, wherein an access mode switch is triggered to utilize a mobility management sublayer and a call management sublayer shared with the first level 3 protocol because communication protocols vary between different communication systems and it would allow for an improved radio communication connection between a base station and a mobile station in a first radio communication system, which operates at least partially within the coverage area of a second radio communication system.

Regarding claim 9 Honkasalo teaches a method of providing wireless services using an unlicensed wireless service and a licensed wireless service (see col. 6, lines, 59-64). Honkasalo teaches in a first mode of operation, utilizing a licensed wireless channel associated with a telecommunications network to service a communication session with a mobile station (see col. 6, lines 59-63 and col. 15, lines 60-67). Honkasalo teaches sending a request to the telecommunications network in the base station controller format to service a communications session using an unlicensed wireless channel of the

Art Unit: 2683

unlicensed wireless service (see col. 15, lines 10-25). Honkasalo does not specifically teach in response to detecting the mobile station is within a service area of the unlicensed wireless service, generating level 1, level 2, and level 3 protocols of the mobile set for the unlicensed wireless service; and converting the level 1, level 2, level 3 protocols for the unlicensed wireless service into a base station controller interface format compatible with the telecommunications network. Pauli teaches in response to detecting a handover situation, generating level 1, level 2, and level 3 protocols of the mobile set and converting the level 1, level 2, level 3 protocols for the wireless service into a base station controller interface format compatible with the telecommunications network for handover (see col. 13, lines 52-55 & 62-67 and col. 14, lines 1-20 & 36-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include in response to detecting the mobile station is within a service area of the unlicensed wireless service, generating level 1, level 2, and level 3 protocols of the mobile set for the unlicensed wireless service; and converting the level 1, level 2, level 3 protocols for the unlicensed wireless service into a base station controller interface format compatible with the telecommunications network because communication protocols vary between different communication systems and it would allow for an improved radio communication connection between a base station and a mobile station in a first radio communication system, which operates at least partially within the coverage area of a second radio communication system.

Regarding claim 11 Honkasalo teaches subsequent to detecting that the mobile station is with the service area of the unlicensed wireless service, registering with an indoor network controller (see col. 15, lines 10-22).

Regarding claim 12 Pauli teaches converting that is performed in at least one of an base station and an indoor network controller (see col. 14, lines 15-28).

Regarding claim 18 Honkasalo teaches a method of providing wireless service using an unlicensed wireless channel and a licensed wireless channel (see col. 6, lines, 59-65). Honkasalo teaches a first mode, servicing a communication session using a licensed wireless channel (see col. 6, lines 59-63 and col. 15, lines 60-67). Honkasalo teaches in a second mode, servicing a communication session using the unlicensed wireless channel (see col. 15, lines 11-25). Honkasalo teaches a service request to trigger the telecommunication network to initiate a handover between the licensed wireless channel and the unlicensed wireless channel (see col. 14, lines 56-62). Honkasalo does not specifically teach generating protocols, wherein the protocols are in a base station controller interface format received by a telecommunication network servicing the licensed wireless channel. Pauli teaches generating protocols, wherein the protocols are in a base station controller interface format received by a telecommunication network servicing a wireless channel (see col. 14, lines 1-20 & 36-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include in generating protocols, wherein the protocols are in a base station controller interface format received by a telecommunication network servicing the licensed wireless channel because communication protocols vary between different communication systems and it would allow for an improved radio communication connection between a base station and a mobile station in a first radio communication system, which operates at least partially within the coverage area of a second radio communication system.

Regarding claim 19 Pauli teaches emulating a base station controller request to handoff a communication session to another base station controller (see col. 13, lines 62-67).

Claims 4, 8, 10, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honkasalo in view of Pauli and Hasan.

Regarding claim 4 Honkasalo and Pauli teach a device as recited in claim 1 except for wherein the mobile station is configured to register its location with the indoor network controller subsequent to detection that it is within the unlicensed wireless service area. Honkasalo does teach registering with the indoor network controller subsequent to detection that it is within the unlicensed wireless service area (see col. 15, lines 10-22). Hasan teaches a mobile station that is configured to register its location with a telecommunication (see col. 1, lines 17-25 and col. 3, lines 12-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein the mobile station is configured to register its location with the indoor network controller subsequent to detection that it is within the unlicensed wireless service area because this would allow for efficient communication from or to roaming subscribers.

Regarding claim 8 Honkasalo, Pauli, and Hasan teach a device as recited in claim 4 and is rejected given the same reasoning as above.

Regarding claim 10 Hasan teaches generating a location update; and sending the location update to the telecommunications network (see col. 1, lines 17-25 and col. 3, lines 12-20).

Art Unit: 2683

Regarding claim 20 Honkasalo and Pauli teach a device as recited in claim 18 except for wherein a single telephone number is associated with providing a communication session on either the licensed wireless service or the unlicensed wireless service. Hasan teaches a single telephone number that is associated with providing a communication session among the wireless service carriers and wired subscribers (see col. 5, lines 45-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein a single telephone number is associated with providing a communication session on either the licensed wireless service or the unlicensed wireless service because this would allow for improved allocation of telephone numbers in a first radio communication system, which operates at least partially within the coverage area of a second radio communication system.

Claims 5-6 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honkasalo in view of Pauli and Rusch.

Regarding claim 5 Honkasalo and Pauli teach a device as recited in claim 1 except for wherein the second level 1 protocol comprises a Bluetooth protocol. Pauli does teach a level 1 protocol that comprises a wireless protocol (see col. 13, lines 53-56). Rusch teaches a Bluetooth protocol (see col. 2, lines 55-59). It would have been obvious to one of ordinary skill in the art to make the device adapt to include wherein the second level 1 protocol comprises a Bluetooth protocol because this would allow for an improved radio communication connection between a base station and a mobile station in a first radio communication system, which operates at least partially within the coverage area of a second radio communication system.

Art Unit: 2683

Regarding claim 6 Honkasalo and Pauli teach a device as recited in claim 1 except for wherein the second level 1 protocol comprises a wireless local area network protocol. Pauli does teach a level 1 protocol that comprises a wireless protocol (see col. 13, lines 53-56). Rusch teaches a wireless local area network protocol (see col. 2, lines 52-54). It would have been obvious to one of ordinary skill in the art to make the device adapt to include wherein the second level 1 protocol comprises a wireless local area network protocol because this would allow for an improved radio communication connection between a base station and a mobile station in a first radio communication system, which operates at least partially within the coverage area of a second radio communication system.

Regarding claim 13 Honkasalo, Pauli, and Rusch teach a device as recited in claim 5 and is rejected given the same reasoning as above.

Regarding claim 14 Honkasalo, Pauli, and Rusch teach a device as recited in claim 5 and is rejected given the same reasoning as above.

Regarding claim 15 Honkasalo, Pauli, and Rusch teach a device as recited in claim 6 and is rejected given the same reasoning as above.

Regarding claim 16 Honkasalo, Pauli, and Rusch teach a device as recited in claim 6 and is rejected given the same reasoning as above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Uchida et al. U.S Patent No. 5,659,878 discloses mobile communication system with satellite communication hand off capability.

Art Unit: 2683

Takahashi et al. U.S. Patent No. 5,870,677 discloses a private mobile communication system easily connecting portable or mobile radiotelephone equipment to public network.

Nishida et al. U.S Patent No. 5,995,828 discloses portable handy phone system.

Ostling U.S Patent No. 6,327,470 B1 discloses handover between fixed and mobile networks for dual mode phones.

Miller, II et al. U.S Patent No. 5,406,615 discloses multi-band wireless radiotelephone operative in a plurality of air interface of differing wireless communications systems.

Arazi et al. Pub. No.: US 2004/0009749 A1 discloses a wireless private branch exchange (WPBX) and communicating between mobile units and base stations.

Carlsson et al. 6,381,457 B1 discloses a method and apparatus for determining if a mobile station is present in an area.

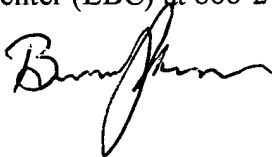
Evans et al. 5,448,619 discloses apparatus and a method of allowing private cellular operation within an existing public cellular system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J. Miller whose telephone number is 571-272-7869. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be "B. J. Smith", written in a cursive style.

November 29, 2005

A handwritten signature in black ink, appearing to be "W. J. Trost", written in a cursive style.

**WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**